REMARKS

The Office Action dated May 3, 2007 (the "Office Action") has been received and noted. Claims 42-56 were examined. Claims 42-56 were rejected. Claims 42 and 48 are amended. Claims 42-56 remain in the Application. Reconsideration of the pending claims is requested in view of the above-amendments and following remarks.

I.   In the Drawings

The drawings were objected to under 37 CFR 1.83(a) because, according to the Examiner, the drawings do not show every feature of the invention specified in the claims. The Examiner, in particular, asserted (see page 2 of the Office Action) that the elements of "invoking a function contained in a third firmware module during a dispatch of the earlier firmware module or the later firmware module," now recited in claim 1 and the elements of "wherein the third firmware module is dispatched before the function contained in the third firmware module is invoked," as recited in claim 48 were not shown in the drawings.

The Applicants respectfully submit that these elements relate the features shown across Fig. 4A, 4B, 6, and 9. For example, as disclosed on page 10, lines 12-15, of the Specification in regard to the import table shown in Fig. 6, a firmware may call services provided in another firmware. In addition, Fig. 9 of the Specification illustrates the steps performed after the calling agent (i.e., the calling firmware) makes a call to a service provided by another firmware. See Specification, page 14, lines 12-15. Therefore, it can be discerned that the elements of "invoking a function contained in a third firmware module during a dispatch of the earlier firmware module or the later firmware module," as recited in claim 1 are clearly shown in the drawings.

Further, it can be understood that in order for the called service (i.e., located in the other firmware) to be executed, it is required that the other firmware to have been previously dispatched (i.e., executed by processor) before the called service can be executed. In other words, the called service cannot properly execute unless the other firmware is already executing (i.e., dispatched) before the service is called. To illustrate this point, block 424 of Fig. 4B (corresponding to block 410 of Fig. 4A) discloses that the dispatch order of the firmware modules is determined based on the dependencies indicated by the resource list of each firmware

module. See Specification, page 8, lines 13-18. The firmware modules can then be scheduled according to this determination as shown in block 428. See Specification, page 8, lines 19-23. Therefore, in light of these reasons, it can be discerned that the elements of "the third firmware module is dispatched before the function contained in the third firmware module is invoked," as recited in claim 48 and shown in Fig. 4A and Fig. 4B in conjunction with features of the claim shown in Fig. 6 and 9 as described above.

In view of at least the above remarks, the Applicants believe that no new drawings are required at this time. Accordingly, the Applicants respectfully request the withdrawal of the objections to the drawings.

II.   In the Specification

In anticipation of the Examiner's objection to the Specification, the Applicants amended paragraphs [0027] and [0031] to replace the phrase "core 201" to state "core 210" to correct the typographical error.

II.   Claim Objection

Claim 42 was objected to due to informalities. Appropriate corrections have been made. Accordingly, the Applicants respectfully request withdrawal of the objections.

III.   Claims Rejected Under 35 U.S.C. § 112, first paragraph

Claim 48 was rejected under 35 U.S.C. § 112, first paragraph, as, according to the Examiner, failing to comply with the written description requirement.

The Applicants submit that the previous discussion in connection with the drawings is applicable to show support of the elements recited in claims 1 and 48. Therefore, for at least the same reasons, the Specification clearly supports the elements of "invoking a function contained in a third firmware module during a dispatch of the earlier firmware module or the later firmware module," as recited in claim 1 and the elements of "wherein the third firmware module is dispatched before the function contained in the third firmware module is invoked," as recited in claim 48.

Accordingly, in light of at least these reasons, the Applicants respectfully request reconsideration and withdrawal of the rejection of claim 48 under 35 U.S.C. § 112, first paragraph.

IV.   Claims Rejected Under 35 U.S.C §102

Claims 42 and 48 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,633,976 issued to Stevens ("Stevens"). A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. MPEP § 2131. The Applicants respectfully submit that each and every element, either expressly or inherently, in amended independent claim 42 and its respective dependent claims, is not set forth in the cited references.

Claim 42, as amended, recites the elements of "invoking a function contained in a third firmware module during a dispatch of the earlier firmware module or the later firmware module." The amendment includes some of the elements previously recited in claim 48. Stevens fails to teach or suggest these elements. Instead, Stevens teaches that the dispatch manager sequentially executes a predetermined number of tasks to initialize the computer. See Stevens, column 3, lines 4-6. To accomplish this task, the dispatch manager copies the plurality of BIOS modules from nonvolatile storage into system memory and then executes them according to the predetermined sequential order. See Stevens, column 3, lines 9-14. However, Stevens does not indicate that a BIOS module may invoke "a function contained in a third firmware module," as required by the claim. Rather, the sequential execution of each BIOS module, by itself, simply indicates that the BIOS modules are executed according to this sequential order as determined by the dispatch manager of Stevens. The feature of calling functions in other BIOS modules is not even mentioned in Stevens. As a result, Stevens fails to teach the elements of "invoking a function contained in a third firmware module during a dispatch of the earlier firmware module or the later firmware module," as recited in the claim. Thus, for at least these reasons, Stevens fails to teach each element of claim 42. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the rejection of claim 42.

In regard to claim 48, this claim depends from claim 42 and incorporates the limitations thereof. Therefore, for at least the reasons mentioned in connection with claim 42, Stevens fails

to teach or suggest each element of claim 48. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the rejection of claim 48.

V.   Claims Rejected Under 35 U.S.C. § 103

A.   Claims Rejected as Unpatentable over Stevens in view of Patel

Claims 43, 44, 50, 51, and 53-56 were rejected under 35 U.S.C. §103(a) as being unpatentable over Stevens, as applied to claim 42, and further in view of U. S. Patent No. 5,999,989 issued to Patel ("Patel"). The Applicants respectfully submit that a *prima facie* case of obviousness has not been established because the cited references do not teach or suggest all of the limitations of claim 42.

In regard to claims 43 and 44, these claims depend from claim 42 and incorporate the limitations thereof. Therefore, for at least the reasons mentioned in connection with claim 42, Stevens fails to teach or suggest each element of claims 43 and 44. In addition, Patel fails to cure the deficiencies of Stevens. The Examiner has not cited and the Applicants are unable to discern the portion of Patel that teaches the missing elements. Therefore, for at least these reasons, Stevens in view of Patel fails to teach or suggest each element of claims 43 and 44. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the rejection of claims 43 and 44.

In regard to claim 50, among other limitations, this claim recites the elements of "determining dependencies among a plurality of firmware modules based on information about services imported and exported by each of the firmware modules." The Examiner admitted on page 6 of the Office Action that Stevens fails to teach or suggest these elements. In addition, Patel fails to teach or suggest these elements as well. The portion of Patel pointed to by the Examiner teaches a ROM header (included in the option ROM) that defines fixed resources required by the option ROM. See Patel, column 7, lines 3-10. However, it cannot be discerned what resources are included in the "fixed resources," let alone, "information about services imported and exported," as required by the claim. In other words, the "fixed resources" could be resources provided by the option ROM itself and, as a result, would not necessitate importing or exporting to satisfy the requirement. In addition, simply defining fixed resources required by the

option ROM, by itself, does not achieve a determination of *"dependencies among a plurality of firmware modules"* (emphasis added) because <u>Patel</u> fails to take in consideration whether these fixed resources are required by other option ROMs *in relation to one another.* Instead, it appears that <u>Patel</u> considers the fixed resource requirements in isolation in regard to a single option ROM rather than "among a plurality of firmware modules," as required by the claim. <u>Id</u>. The remaining portion of <u>Patel</u> relied upon by the Examiner teaches an interrupt hook and a plurality of registers used for the boot connection routine, which the Examiner has attempted to characterize as the "information about services . . . *exported*," (emphasis added) as recited in the claim. However, the interrupt hooks simply enable the configuration software to locate information pertaining to whether the device may act as *a boot device* and to locate values related to defining *resource requirements*, which neither can be considered to be equivalent to "information about services . . . exported." <u>See</u> <u>Patel</u>, column 8, lines 43-46. Therefore, for at least these reasons, <u>Patel</u> fails to teach or suggest each element of claim 50.

In regard to claims 51 and 53, these claims depend from claim 50 and incorporates the limitations thereof. Therefore, for at least the reasons mentioned in connection with claim 50, <u>Stevens</u> in view of <u>Patel</u> fails to teach or suggest each element of claims 51 and 53. Therefore, for at least these reasons, <u>Stevens</u> in view of <u>Patel</u> fails to teach or suggest each element of claims 51 and 53. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the rejection of claims 51 and 53.

In regard to claim 54, this claim recites the elements of "one of the two firmware modules is to initialize a hardware component that is not present in the system." The Examiner admitted on page 7 of the Office Action that <u>Stevens</u> fails to teach or suggest these elements. <u>Patel</u> fails to teach these elements as well. The portion of <u>Patel</u> cited by the Examiner, in contrast, teaches activating and deactivating devices that *the BIOS already knows about* to determine the devices required to boot the operating system. <u>See</u> <u>Patel</u>, column 6, lines 10-13 and 18-24. It can be understood, then, that these devices are *necessarily present* in order for the system to accomplish this task, rather than "not present in the system," as required by the claim. As a result, <u>Patel</u> fails to teach or suggest the elements of "one of the two firmware modules is to initialize a hardware component that is not present in the system," as recited in the claim. Therefore, for at least these reasons, <u>Patel</u> fails to teach or suggest each element of claim 54.

Thus, Stevens in view of Patel fails to teach or suggest each element of claim 54. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the rejection of claim 54.

In regard to claims 55 and 56, these claims depend from claim 54 and incorporate the limitations thereof. Therefore, for at least the reasons mentioned in connection with claim 54, Stevens in view of Patel fails to teach or suggest each element of claims 55 and 56. Therefore, for at least these reasons, Stevens in view of Patel fails to teach or suggest each element of claims 55 and 56. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the rejection of claims 55 and 56.

B.   Claims Rejected as Unpatentable over Stevens in view of Ayers

Claims 45-47 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Stevens, as applied to claim 42, and further in view of U. S. Patent 6,353,924 issued to Ayers et al. ("Ayers").

In regard to claims 45-47, these claims depend from claim 42 and incorporate the limitations thereof. Therefore, for at least the reasons mentioned in connection with claim 42, Stevens fails to teach or suggest each element of claims 45-47. In addition, Ayers fails to cure the deficiencies of Stevens. The Examiner has not cited and the Applicants are unable to discern the portion of Ayers that teaches the missing elements. Therefore, for at least these reasons, Stevens in view of Ayers fails to teach or suggest each element of claims 45-47. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the rejection of claims 45-47.

C.   Claim Rejected as Unpatentable over Stevens in view of Katayama

Claim 49 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Stevens, as applied to claim 42, and further in view of Patel and U.S. Publication 2001/0007119 to Katayama, et al ("Katayama").

In regard to claim 49, this claim depends from claim 42 and incorporates the limitations thereof. Therefore, for at least the reasons mentioned in connection with claim 42, Stevens fails

to teach or suggest each element of claim 49. In addition, <u>Patel</u> and <u>Katayama</u> fail to cure the deficiencies of <u>Stevens</u>. The Examiner has not cited and the Applicants are unable to discern the portion of <u>Patel</u> and <u>Katayama</u> that teach the missing elements. Therefore, for at least these reasons, <u>Stevens</u> in view of <u>Patel</u> in further view of <u>Katayama</u> fails to teach or suggest each element of claim 49. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the rejection of claim 49.

D.   <u>Claim Rejected as Unpatentable over Stevens and Patel in view of Ayers</u>

Claim 52 was rejected under 35 U.S.C. § 103(a) as being unpatentable over <u>Stevens</u> and <u>Patel</u>, as applied to claim 50, and further in view of <u>Ayers</u>, as applied to claim 45 and 47.

In regard to claim 52, this claim depends from claim 50 and incorporates the limitations thereof. Therefore, for at least the reasons mentioned in connection with claim 50, <u>Stevens</u> in view of <u>Patel</u> fails to teach or suggest each element of claim 52. In addition, <u>Ayers</u> fail to cure the deficiencies of <u>Stevens</u> in view of <u>Patel</u>. The Examiner has not cited and the Applicants are unable to discern the portion of <u>Ayers</u> that teach the missing elements. Therefore, for at least these reasons, <u>Stevens</u> in view of <u>Patel</u> in further view of <u>Ayers</u> fails to teach or suggest each element of claim 52. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the rejection of claim 52.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending patentably define the subject invention over the prior art of record and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes that a telephone conference would be useful in moving the application forward to allowance, the Examiner is encouraged to contact the undersigned at (310) 500-4787.

Respectfully submitted,

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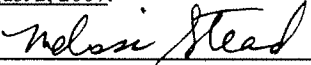
Dated:＿＿August 2, 2007＿＿ ＿＿＿＿＿/Jonathan S. Miller/＿＿＿＿＿＿＿

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CERTIFICATE OF TRANSMISSION
I hereby certify that this correspondence is being submitted electronically via EFS Web to the United States Patent and Trademark Office on August 2, 2007.

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